



CONGRESSIONAL BUDGET OFFICE
COST ESTIMATE

April 3, 1998

S. 1250

**National Aeronautics and Space Administration Authorization Act
for Fiscal Years 1998, 1999, and 2000**

*As ordered reported by the Senate Committee on Commerce, Science, and Transportation
on March 12, 1998, with subsequent amendments*

SUMMARY

S. 1250 would authorize annual funding for the National Aeronautics and Space Administration (NASA) for fiscal years 1998 through 2000. It also would expand the agency's authority to indemnify certain NASA contractors against some potential liability claims, and would revise various policies governing space programs. Assuming the appropriation of the specified amounts for 1999 and 2000, CBO estimates that implementing this bill would result in additional discretionary spending of \$27.2 billion over the 1999-2003 period. (Funding for 1998 has already been appropriated at the level specified in S. 1250.)

Enacting the bill could affect both direct spending and receipts; therefore, pay-as-you-go procedures would apply. CBO estimates, however, that any such effects would not be significant.

S. 1250 contains no intergovernmental mandates as defined in the Unfunded Mandates Reform Act of 1995 (UMRA) and would impose no costs on state, local, or tribal governments. The bill would impose new private-sector mandates, but CBO estimates that the cost of these mandates would not exceed the statutory threshold established by UMRA.

DESCRIPTION OF THE BILL'S MAJOR PROVISIONS

S. 1250 includes both spending and regulatory measures. The amounts authorized to be appropriated would be subject to certain limitations, including a cap on cumulative funding for the space station. In addition, S. 1250 would direct NASA to submit a plan to privatize the space shuttle and to issue reports and guidelines related to the space station, the use of surplus property, and data disclosure. NASA would be required to acquire data on space and

earth sciences from commercial vendors when cost-effective and to follow certain procurement practices.

S. 1250 also would authorize NASA to indemnify or insure developers of experimental reusable launch vehicles under certain conditions. To be eligible for indemnification, developers would be required to meet safety standards, provide primary insurance, and agree to cross-waivers of liability with the federal government. Federal payments, which would be limited to \$1.5 billion per incident, would be made under terms and procedures similar to those in existing law for indemnifying users of the space shuttle and commercial space vehicles licensed by the Department of Transportation (DOT). Under those guidelines, NASA could pay claims using previously appropriated but unobligated funds or could seek additional appropriations under expedited Congressional review procedures. This indemnification authority would expire on December 31, 2002, but could be extended through September 30, 2005, if needed for the operation of an experimental vehicle.

Finally, S. 1250 would prohibit the launch of any payload with obtrusive space advertising by existing and prospective licensees of commercial space transportation systems. The bill also would encourage the President to negotiate agreements with foreign countries to ban such advertising worldwide.

ESTIMATED COST TO THE FEDERAL GOVERNMENT

CBO estimates that implementing S. 1250 would increase discretionary spending by a total of \$27.2 billion over the 1999-2003 period, assuming the appropriation of the authorized amounts. Allowing NASA to indemnify experimental reusable launch systems could affect direct spending, but CBO estimates that any such payments would not be significant over the next five years. Provisions barring the licensing of space payloads with obtrusive advertising could affect receipts, but we estimate that the effects would not be significant.

The estimated budgetary impact of S. 1250 is shown in the following table. The costs of this legislation fall primarily within budget function 250 (general science, space, and technology).

	By Fiscal Year, in Millions of Dollars					
	1998	1999	2000	2001	2002	2003
SPENDING SUBJECT TO APPROPRIATION						
NASA Spending Under Current Law						
Budget Authority ^a	13,638	0	0	0	0	0
Estimated Outlays	14,323	5,282	497	162	0	0
Proposed Changes						
Authorization Level	0	13,465	13,703	0	0	0
Estimated Outlays	0	8,366	13,096	5,082	460	164
NASA Spending Under S. 1250						
Authorization Level ^a	13,638	13,465	13,703	0	0	0
Estimated Outlays	14,323	13,648	13,593	5,244	460	164

a. The 1998 level is the amount appropriated for that year; the amount authorized by the bill for 1998 is the same as the amount appropriated.

BASIS OF ESTIMATE

Spending Subject to Appropriation

For the purposes of this estimate, CBO assumes that appropriations will be provided near the beginning of each fiscal year and that outlays will follow historical patterns for such activities.

Allowing NASA to insure or indemnify developers of experimental reusable launch vehicles could result in additional discretionary spending over the next five years, but CBO expects the increase would not be significant. For the purposes of this estimate, we assume that NASA would opt to indemnify the developers rather than purchase insurance. According to agency officials, neither DOT nor NASA has ever paid claims to third parties for incidents involving commercial space transportation systems or users of the space shuttle. Thus far, the costs associated with incidents have been small and have been covered by private insurance. Although these reusable launch vehicles are experimental, NASA asserts that the probability of an incident—and the likelihood of federal payments—would be similar to that of existing launch vehicles. Hence, CBO estimates that these provisions would have a negligible effect on discretionary spending.

Other provisions in the bill would not have a significant effect on discretionary spending.

Direct Spending

S. 1250 would authorize the Administrator of NASA to indemnify claims up to \$1.5 billion regardless of whether amounts are available from appropriations to pay such claims. (This contrasts with DOT's indemnification authority, which is explicitly limited to amounts provided in appropriation acts.)

Giving NASA the authority to indemnify developers of experimental reusable launch vehicles could result in direct spending, but we estimate that any such spending would not be significant. Assuming that the risk of claims would be similar to that of existing launch vehicles and that private insurance and appropriated funds would be tapped first, the likelihood of direct spending for indemnification payments would be small. If NASA were obligated to pay claims in excess of the amounts available from private insurance and appropriations, CBO assumes that any additional payments would be made from the Claims and Judgments Fund, which is direct spending.

Receipts

Violations of the prohibition on obtrusive space advertising could result in the collection of civil penalties, but CBO estimates that any additional receipts would not be significant. The Department of Transportation has never collected a penalty for a violation of the licensing and related requirements of the commercial space transportation program.

PAY-AS-YOU-GO CONSIDERATIONS

Section 252 of the Balanced Budget and Emergency Deficit Control Act of 1985 sets up pay-as-you-go procedures for legislation affecting direct spending and receipts. Provisions in the bill authorizing NASA to indemnify developers of certain experimental vehicles could result in direct spending, but CBO estimates that no significant costs would result. Prohibiting obtrusive space advertising could result in the collection of additional civil penalties, but we estimate that the effect on receipts would be negligible.

ESTIMATED IMPACT ON STATE, LOCAL, AND TRIBAL GOVERNMENTS

S. 1250 contains no intergovernmental mandates as defined in UMRA, and would not impose any costs on state, local, or tribal governments. Currently, about \$830 million of NASA's

research and development budget goes to academic institutions, including public universities. With the reauthorization of NASA's programs, this funding would continue.

ESTIMATED IMPACT ON THE PRIVATE SECTOR

S. 1250 would create a new private-sector mandate by prohibiting holders of licenses for commercial space launches from launching a payload containing material to be used for obtrusive space advertising. Obtrusive space advertising would be defined as advertising in outer space that is capable of being recognized by a human being on the surface of the Earth without the aid of a telescope or other technological device. Based on information provided by the Department of Transportation, CBO estimates that this new private-sector mandate would impose no direct costs on license holders.

PREVIOUS CBO ESTIMATE

On April 21, 1997, CBO transmitted a cost estimate for H.R. 1275, the Civilian Space Authorization Act, Fiscal Years 1998 and 1999, as ordered reported by the House Committee on Science on April 16, 1997. Differences between the estimates are attributable to differences in the two bills. For example, the House bill would authorize funding for multiple agencies but for a shorter period of time. While the House bill would expand the Department of Transportation's authority to include reentry vehicles, sites, and services, it would not authorize NASA to insure or indemnify experimental reusable launch vehicles.

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